





sliced processor for use in a spread spectrum system,” the despreader, which is a spread spectrum receiver component, is clearly related to the invention.

In view of the above explanation, it is respectfully submitted that the claims are definite. Reconsideration and withdrawal of this rejection is therefore respectfully requested.

***Claim Rejections 35 U.S.C. §§ 102 and 103***

Claims 1-5 and 7-11 are rejected under 35 U.S.C. § 102(b) as being anticipated by Berg (U.S. Patent No. 5,920,607). Claims 6, 12, and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Berg in view of Cai et al. (U.S. Patent No. 6,349,363). Applicant respectfully traverses these rejections for the reasons set forth below.

The present invention, as defined by claims 1-12, is directed to building a time-sliced architecture in a spread spectrum system. A set of applications is analyzed by extracting real time aspects from each application in the set of applications, determining an optimal granularity based on the real time aspects, and adjusting the optimal granularity based on a context switching overhead, and then a specific time-sliced architecture is built to accommodate the range of applications based on the analysis.

Berg is directed to a system for controlling a wireless network such that degradation of service availability is reduced. The system monitors an existing a wireless network, and in response to a network degradation, adjusts setup parameters of network equipment to reduce the degradation. An example of such a degradation is illustrated in Fig. 1, in which a catastrophic degradation causes cell 110 to malfunction, resulting in no footprint for cell 110. After assessing the loss, a control mechanism 200 identifies a corrective action of changing the footprint of neighboring cells 102, 104, 106, and 108 to provide coverage where cell 110 no longer can.

As asserted in the previous Response, Berg does not at all relate to the building of a time-sliced architecture, as required by the claimed invention. Rather, Berg is directed to monitoring an existing system for degradation and taking corrective action.

The Examiner responds by asserting that Berg teaches an architecture that can handle multiple tasks at one time, and refers Applicant to col. 3, lines 34-45. This section of Berg merely lists the monitoring and control capabilities of the control center. There is no suggestion of a time-sliced architecture in which multiple tasks are interleaved and performed simultaneously.

Also, the Examiner asserts on page 6 of the Office Action that Berg teaches the use of multiple time-sliced wireless standards in col. 5, lines 40-55. In these lines, Berg merely states that “code division multiple access (CDMA), time division multiple access (TDMA), and frequency division multiple access (FDMA) modulation schemes impose different frequency reuse restrictions for adjacent cells on control mechanism 200.” While TDMA is a communications protocol in which *data* is divided by time, this portion of Berg does not suggest a time-sliced architecture, in which multiple *tasks* are interleaved and performed simultaneously.

Since Berg does not relate to the building of a time-sliced architecture, it necessarily follows that Berg does not teach or suggest determining an optimal granularity, which is a feature of building time-slice architectures, or adjusting this optimal granularity based on a context switching overhead. Independent claims 1 and 7 are therefore patentable over Berg for at least these reasons.

Claims 2-5 depend on claim 1, and claims 8-11 depend on claim 7. These dependent claims are patentable over the applied references at least by virtue of their dependence on claims 1 and 7. Also, these claims recite further details of building of a time-sliced architecture. Since Berg is not related to the building of a time-sliced architecture, Berg also does not teach or suggest these further recited features. And thus the dependent claims are patentable over Berg for these additional reasons.

Claim 6 depends on claim 1 and claim 12 depends on claim 7. The Examiner additionally applies Cai against these claims as teaching a cache. While Cai may teach a cache, it fails to make up for the deficiencies of Berg as discussed above, and thus claims 6 and 12 are patentable at least by virtue of their dependence on claims 1 and 7, respectively.

Claim 13 is directed to a time-sliced processor for use in a spread spectrum system. The processor includes a master control unit 110 including a time slot table 112 and a partial sums search table 114, a data cache 102 for receiving input data, and finger processing elements 104, 106, 108. Each finger processing element has a cache 122 for receiving data from the data cache 102, a data selector 124 connected to an output of the cache, a despreader 126 connected to an output of the data selector, and a symbol integrator 128 connected to an output of the despreader.

As stated above, Berg is directed to monitoring an existing system for degradation and taking corrective action. Berg does not at all relate to a time-sliced architectures, as required by the claimed invention. Cai, which is directed to a cache, does not make up for Berg's deficiencies. Moreover, contrary to the Examiner's assertions in the Office Action, Cai does not teach or suggest a master control unit or finger processing elements. The claimed master control unit 110 includes a time slot table 112 and a partial sums search table 114, features found in wireless communication systems and not suggested anywhere in Cai's cache system. Thus, claim 13 is patentable over the applied references for at least this reason.

Moreover, Cai does not suggest finger processing elements, another feature of wireless communication systems. A finger processing element is an individual channel of a wireless rake receiver, which combines the outputs of the finger processing elements to form a stronger received signal. As recited, each finger processing element has not only a cache 122 and a data selector 124, but also a despreader 126 and a symbol integrator 128, which are also elements of wireless communication systems and not suggested anywhere in the cache system of Cai. Thus, claim 13 is patentable over the applied references for at least these additional reasons.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

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